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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,816	11/28/2000	Barry Reginald Hobson	71386-6	6414

20915 7590 12/09/2002

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EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 12/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/723,816

Applicant(s)

HOBSON ET AL.

Examiner

Judson H Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-72 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 65-67 and 72 is/are allowed.
- 6) ☐ Claim(s) 19, 20, 22, 25, 27, 39, 40, 44, 45, 50, 57, 63, 64 and 68-71 is/are rejected.
- 7) ☒ Claim(s) 21, 23, 24, 26, 28-38, 41-43, 46-49, 51-56 and 58-62 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/196,274.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 4 of the claim applicant recites "a support capable of two dimensional motion in a single plane." In line 8 applicant refers to "extend with a circumferential aspect to a plane containing the support." If applicant is referring to separate planes, then the planes should be referred to as a first and second plane. If applicant is referring to the same plane, then line 8 should refer to said plane. Furthermore in line 8, it is unclear what extends with a circumferential aspect. Applicant started the sentence referring to a support, went on to refer to said support with conductive paths having a segment, put in a clause defining an aspect of the segment and then states "and extend with" The object extending could be a segment of a current carrying path, the path as a whole or the support. Clarification is required.

Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 8 of claim 39 refers to a "plane containing said support." Line 12 refers to "two dimensional motion in a single plane." If applicant is referring to separate planes, then the planes should be referred to as a first and second plane. If applicant is referring to the same plane, then line 12 should refer to said plane.

Claim 57 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 8 of claim 57 refers to a "plane containing said support." Line 12 refers to "two dimensional motion in a single plane." If applicant is referring to separate planes, then the planes should be referred to as a first and second plane. If applicant is referring to the same plane, then line 12 should refer to said plane.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 19, 20, 22, 25, 27, 39, 40, 44, 45, 50, 63, 64 and 68-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Hollis, Jr. 5,153,494. Hollis, Jr. discloses a magnet with lines of flux extending through an air gap as described in column 5 lines 17-10, a support 70 with current carrying paths 76 as shown in figure 2 with the sides of the coils extending beyond the support viewed as having a circumferential aspect wherein the support is capable of two dimensional motion in a plane as described in column 4 lines 60-63.

In regard to claims 20, 26 and 40, see Hollis, Jr. column 6 lines 18-20 and column 7 lines 46-49.

In regard to claim 22, see Hollis, Jr. figure 2, where the side of the magnet closest to the movable piece 70 is viewed as being the innermost side of the magnet.

In regard to claims 25, 45, 69 and 70, see Hollis, Jr. figure 2.

In regard to claims 27, 50, 64 and 68, see Hollis, Jr. column 6 lines 62-66.

In regard to claim 39, see Hollis, Jr. column 4 lines 60-63 which discloses a three coil embodiment instead of the four coil embodiment shown in figure 2. Three coils equally spaced about the support would necessarily provide a first and second coil disposed at non-diametrically opposed locations.

In regard to claim 44, see Hollis, Jr. column 1 lines 43-47. Since the device is designed to move a limited distance, the segment would inherently stay under the influence of the magnetic flux through the relative motion.

In regard to claim 63, see Hollis, Jr. column 2 lines 6-9, column 6 lines 2-12 and column 6 lines 62-68. Beyond saying that an analog or digital controller controls the current to the motors, Hollis, Jr. does not specify AC or DC in his own device. However there is no mention in Hollis, Jr. about phases of the current and therefore no indication that Hollis, Jr. uses anything other than the power supply of the prior art devices.

In regard to claim 71, see Hollis, Jr. figure 5A which discloses segments in non-diametrically opposed locations and see Hollis, Jr. figure 2 which discloses magnets, magnetic air gaps and segments in the air gaps where currents flowing through the segments produces thrust acting on the support.

Allowable Subject Matter

Claims 21, 23, 24, 26, 28-38, 41-43, 46-49, 51-56 and 58-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, provided the U.S.C. 112 rejection of claims 19, 39 and 57 are overcome.

Claim 57 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 65-67 and 72 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or teach a magnet in the form of a closed loop in combination with the other features of claim 21. In regard to claim 23, the prior art of record does not disclose or teach a magnet with the outermost side having an air gap in combination with the other features of this claim. In regard to claims 24 and 43, single turn conductive coils are known in the art and multiple coils each carrying a single phase of current are also known in the art. However combining those features with the other features of these claims is not obvious. In regard to claims 26 and 46, the prior art of record does not disclose or teach a support having a central aperture in combination with the other features of these claims. In regard to claims 28 and 61, the prior art of record does not disclose or teach inducing current to flow in electrically conductive paths of the support in combination with the other features of these claims. In regard to claims 31 and 53, the prior art of record does not disclose or teach a support having a plurality of apertures wherein at least one electrically conductive path is constituted by a portion of the support in combination with the other features of these claims. In regard to claims 32 and 54, the prior art of record does not disclose or teach a support made of an electrically conductive material in the form of a wheel where the spokes of the wheel are electrically conductive paths in combination with the other features of these claims. In regard to claim 35, the prior art of record does not disclose or teach a coupling to move a support in two dimensions to induce current to flow in the conductive paths in combination with the other features of this claim. In regard to

claims 36 and 60, the prior art of record does not disclose or teach the number of segments equal to the number of electrical phases supplied to the support in combination with the other features of this claim. Since Hollis, Jr. uses DC for his device, there are no phases. In regard to claim 37, the prior art of record does not disclose or teach a support of electrically conductive material wherein the segments are constituted by sections of the support in combination with the other features of this claim. In regard to claim 38, the prior art of record does not disclose or teach a transformer including a primary winding and a secondary winding, said secondary winding constituted by a section of the support in combination with the other features of this claim. In regard to claim 41, the prior art of record does not disclose or teach an electric machine with a magnet having an innermost side in which is formed an air gap and an outermost side which forms a part of the magnetic flux return path of the magnet. In regard to claim 42, the prior art of record does not disclose or teach an electric machine with a magnet having an outermost side in which is formed an air gap and an innermost side which forms a part of the magnetic flux return path of the magnet in combination with the other features of this claim. In regard to claim 47, three phase power supplies with each phase being 120 degrees out of phase from the other phases are known in the art. However modifying Hollis, Jr. to work with a three phase power supply would not have been obvious. In regard to claim 51, the prior art of record does not disclose or teach an induction device in combination with the other features of this claim. In regard to claim 57, the prior art of record does not disclose or teach an inductive generator where the relatively movable member of the generator moves in two dimensions of a plane. In regard to claim 65, the prior art of record does not disclose or teach a support mounted for motion in two dimensions in a plane, a magnet defining an air gap, and short circuited electrical path segments wherein forces

created by currents and magnetic flux do not lie along a common line. While Hollis, Jr. discloses a support mounted for motion in two dimensions, Hollis Jr. does not disclose short circuited windings. Short circuited windings are used in inductance or reluctance motors, but combining the short circuited windings of such a motor with Hollis, Jr. would not have been obvious to a person of ordinary skill in the art. In regard to claim 72, the prior art of record does not disclose or teach a support movable relative to magnets where the support has conductive paths with a segment lying in a common first plane and the support has conductive paths each path having a segment lying in a plane not parallel to the first plane and force is produced by interaction of current flowing through the segments and lines of magnetic flux to produce thrust forces corresponding to the planes of the different segments.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fong 3,721,844 discloses short circuited windings. Barnes 3,064,150 discloses a magnet for a motor in the form of a closed loop. Fono 3,588,559 discloses a magnet having an innermost side in which is formed an air gap and an outermost side which forms part of a magnetic flux return path. Sisk 4,554,475 discloses a coil having a single conductor.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ 
December 5, 2002


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
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